# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/965,030 | 09/27/2001 | Yoshikatsu Niwa | 450100-03503 | 2594 |

20999      7590      10/28/2005

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| EXAMINER |
|---|
| SHIN, KYUNG H |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2143 | |

DATE MAILED: 10/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on *15 August 2005*.

2a) ☐ This action is **FINAL.**  2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) *1-12* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-12* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *27 September 2001* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All  b) ☐ Some * c) ☐ None of:

        1. ☒ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____.

        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

# DETAILED ACTION

## *Response to Amendment*

1.   This action is responding to application RCE filed 8/15/2005.

2.   Claims **1 - 12** are pending.  Claims **1, 2, 5, 6, 7, 9** have been amended.
Independent claims are **1, 5, 9**.

## *Response to Arguments*

3.   Applicant's arguments with respect to claims 1-12 have been considered but are
moot in view of the new ground(s) of rejection.

### *Response to Remarks*

3.1   Applicant argues that the referenced prior art does not disclose: " *... the issue*
*of resending a large asynchronous packet more than once, specifically when*
*the destination of the large packet is not connected within the communication*
*system ... " (see Remarks Page 9, Lines 18-20)*

The Yeung ( 6,643,702 ) and Bastiani ( 6,636,922 ) prior art combination
discloses the capability to resend a communication packet when it is detected
that the destination node is not available.  (see Bastiani col. 33, line 63 - col.
34, line 19; col. 45, lines 60-62: capability to detect host not currently available,
capability to resend a packet when destination node is not currently available)

3.2   Applicant argues that the referenced prior art does not disclose: " *...*
*communications between devices ... " (see Remarks Page 10, Line 5) ; ' ...*
*This feature is a distinguishing characteristic of the instant invention, as recited*

*in the specification and claim 1 ... " (see Remarks Page 10, Lines 8-9)*

There is no mention of the word "device" within the specification or in the claims limitations. The claims limitations stress a node as network communications connection points. By definition, a node is a network connection point, such as a terminal, computer, hub, or switch (i.e. or a device) operating in a network environment. (1. http://www.answers.com/node&r=67 ) Clearly, there is no indication in the specification or claims limitations of a device to device communication capability in any capacity. The Yeung ( 6,643,702 ) and Bastiani ( 6,636,922 ) prior art combination discloses communications between nodes within a network environment. (see Bastiani col. 33, lines 5-9: recoverable communications between nodes)

3.3    Applicant argues that the referenced prior art does not disclose: *" ... there is no address field in pack ... " (see Remarks Page 10, Lines 6-7)* ;

The Yeung ( 6,643,702 ) and Bastiani ( 6,636,922 ) prior art combination discloses addressing information within the communications information for the transfer of data. (see Bastiani col. 11, lines 36-40; col. 12, lines 22-24; col. 49, lines 52-54: addressing information utilized to transfer data)

3.4    Applicant argues that the referenced prior art does not disclose: *" ... wherein at least one packet of the data, transmitted to the node that is not connected, is processed as an error packet, and wherein the destination information comprises a node ID and a bus ID ..." (see Remarks Page 10, Lines 13-15)*

The Yeung ( 6,643,702 ) and Bastiani ( 6,636,922 ) prior art combination

discloses addressing information (i.e. node identification, bus (i.e. interface, port) identification) within the communications information utilized to transfer data. The Yeung ( 6,643,702 ) and Bastiani ( 6,636,922 ) prior art combination discloses node identification information (i.e. node ID) (see Bastiani col. 11, lines 36-40; col. 12, lines 22-24: device (i.e. node) addressing), and an interface (i.e. port, bus) address indicated within the communications information utilized to transfer data. (see Bastiani col. 10, lines 59-63; col. 12, lines 39-43: port (i.e. bus, interface) addressing)

In addition, the Yeung ( 6,643,702 ) and Bastiani ( 6,636,922 ) prior art combination discloses that when a destination connection point is not available, the packet is processed as an error packet. (see Bastiani col. 34, lines 6-9; col. 34, lines 12-16: destination node not available, error bits set (i.e. packet processed as an error packet)) Therefore, the rejection of claims 1-12 is proper and maintained herein.

## *Claim Rejection - 35 USC § 103*

The text of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4.    **Claims 1 - 3, 5 - 7, 9 - 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yeung** (US Patent No. 6,643,702) in view of **Bastiani et al.** (US Patent No. 6,636,922).

**Regarding Claims 1** (Currently Amended), **5** (Currently Amended), **9** (Currently

Amended), Yeung discloses a data packet processing apparatus, network system, data

transfer method for connecting <u>a plurality of</u> buses and for transmitting data through <u>a</u>

<u>first one of the plurality of buses</u> <u>to a second one of the plurality of buses</u>, according to

destination information <u>related</u> to the data.   (see Yeung col. 2, lines 44-56: *" ... a switch*

*... number of ingress ports and egress ports in the switch may vary depending on ...*

*how many devices or buses are served by the switch ... "*) Yeung does not disclose

determining that the destination node is not connected. However, Bastiani discloses a

data transfer apparatus, network system, data transfer method for connecting buses

comprising:

    a) transmitting means for determining according to the destination information

        whether <u>a</u> node serving as a destination of the data is connected to <u>the second</u>

        <u>one</u> of the buses, wherein, when <u>the means for determining</u> determines that the

        node is not connected, a data transmission source receives a predetermined

        error information <u>signal</u>;  (see Bastiani col. 9, lines 30-36; col. 34, lines 6-19: path

        failure determination, destination node not connected (i.e. path failure),

        predetermined alarm (i.e. action: error bits set, packet processed as error packet)

        completed)

    b) <u>wherein at least one packet of the data, transmitted to the node that is not</u>

        <u>connected, is processed as an error packet;</u>  (see Bastiani col. 9, lines 30-36; col.

        34, lines 6-19: path failure notification, destination node not connected (i.e. path

failure), predetermined alarm (i.e. action: error bits set, packet processed as error

packet) completed) <u>and</u>

c)   <u>wherein the destination information comprises a node ID and a bus ID.</u>  (see

Bastiani col. 11, lines 36-40; col. 12, lines 22-24: device addressing (i.e. node ID,

bus ID) utilized for communications  ;  col. 10, lines 59-63; col. 12, lines 39-43:

interface (i.e. bus, port) addressing utilized)

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify Yeung to determine connection availability of destination

node and to process communications failure as taught by Bastiani.  One of ordinary skill

in the art would be motivated to employ Bastiani in order to provide and optimize a more

robust communications protocol between systems and peripherals in an interconnected

network environment.  (see Bastiani col. 2, lines 19-22: " ... *providing an advanced*

*serial protocol (ASP) that defines a more robust data transmission environment for*

*communication between host computers and peripheral devices ...* ")


**Regarding Claims 2** (Currently Amended), **6** (Currently Amended), Yeung does not

disclose the determination that the destination node exists on a network. However,

Bastiani discloses the data transfer apparatus, network system, data transfer method

according to claims 1, 5, wherein the means <u>for determining</u> determines according to

the destination information whether the bus to which the node serving as the destination

of the data is connected, exists on a network, and wherein when the bus does not exist,

transmits predetermined error information to the data transmission source. (see Bastiani

col. 9, lines 30-36; col. 34, lines 6-19: path analysis and failure notification sequence or

predetermined alarm (action) is completed when it is determined that destination node

is not connected or path fault)

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify Yeung to determine that the destination node is not

connected and to process communications fault as taught by Bastiani. One of ordinary

skill in the art would be motivated to employ Bastiani in order to provide and optimize a

more robust communications protocols between systems and peripherals in an

interconnected network environment. (see Bastiani col. 2, lines 19-22)


**Regarding Claims 3, 11**, Yeung discloses the data transfer apparatus, network system,

data transfer method according to claims 1, 9, wherein the data transfer apparatus is

connected to another bus through a second data transfer apparatus, and wherein the

data transfer apparatus further comprises transfer means for transferring the data from

the data transfer apparatus to the second data transfer apparatus according to the

destination information. (see Yeung col. 2, lines 44-56: destination network node is

another data processing apparatus)


**Regarding Claim 7** (Currently Amended), Yeung discloses the data transfer apparatus,

network system, data transfer method according to claim 5, wherein the data transfer

apparatus is connected to the second bus through a second data transfer apparatus,

and the data transfer apparatus further comprises transfer means for transferring the

data from the data transfer apparatus to the second data transfer apparatus according

to the destination information. (see Yeung col. 2, lines 44-56: destination network node

is another data processing apparatus)

**Regarding Claim 10**, Yeung does not disclose the determination that the destination

node exists on a network. However, Bastiani discloses the data transfer apparatus,

network system, data transfer method according to claim 9, wherein, in the second step,

it is determined according to the destination information whether the bus to which the

node serving as the destination of the data is connected, exists on a network, and when

the bus does not exist, predetermined error information is transmitted to the data

transmission source. (see Bastiani col. 9, lines 30-36; col. 34, lines 6-19: path analysis

and failure notification sequence or predetermined alarm (action) is completed when it is

determined that destination node is not connected or a communications path failure)

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify Yeung to determine that the destination node is not

connected and to process communications fault as taught by Bastiani. One of ordinary

skill in the art would be motivated to employ Bastiani in order to provide and optimize a

more robust communications protocols between systems and peripherals in an

interconnected network environment. (see Bastiani col. 2, lines 19-22: " ... serial

protocol ... that defines a more robust data transmission environment for

communication between host computers and peripheral devices ... ")

5.　**Claims 4, 8, 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over

**Yeung-Bastiani** as applied to claims 1, 5, 9 above, in view of **Takabatake** (US Patent

No. 6,728,244) and further in view of **Lappetelainen et al.** (US Patent No. 6,693,915).

**Regarding Claims 4, 8, 12**, Yeung does not disclose an IEEE 1394 data transfer

apparatus based on the BRAN specification.　Lappetelainen discloses that the BRAN

specification is equivalent to the HIPERLAN specification (see Lappetelainen col. 1,

lines 46-51: HIPERLAN specification equal to BRAN specification) and Takabatake

discloses an IEEE 1394 data transfer apparatus based on the HIPERLAN specification.

(see Takabatake col. 21, lines 49-53; col. 3, lines 56-61; col. 8, lines 24-29: HIPERLAN

(High Performance Radio Access Network) specification and wireless IEEE 1394

standards for a network device used in data transmissions)　Therefore, the combination

of Takabatake and Lappetelainen discloses the data transfer apparatus according to

claims 1, 5, 9, wherein the data transfer apparatus is an IEEE-1394 bridge device

conforming to the BRAN specification.

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify Yeung to utilize a wireless IEEE 1394 device operating

as a bridge based on the BRAN (HIPERLAN) specification as taught by Takabatake and

Lappetelainen.　One of ordinary skill in the art would be motivated to employ

Takabatake in order to interconnect IEEE 1394 buses to more effectively utilize wireless

(i.e. radio) resources within an interconnected network environment (see Takabatake

col. 1, lines 12-16: " ... *realizing data transfer between interconnected different networks*

*by identifying packets on each network, managing correspondences of packets between*

*different networks, and converting packets ... "),* and to employ Lappetelainen in order

to effectively optimize performance of radio based communications (see Lappetelainen

col. 4, lines 52-57: " *... attain more effective utilization of the radio resources ... produce*

*a more disturbance-free data transmission system ... ").*

### Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Kyung H. Shin whose telephone number is (571) 272-

3920. The examiner can normally be reached on 9 am - 7 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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KHS
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